

ABSTRACT

A generic quality of service (“G-QoS”) protocol and architecture for applications executing in multiple transport protocol environments is provided. G-QoS negotiators establish a QoS level for user applications by communicating over a network and exchanging network and application data via a G-QoS protocol that can be implemented using out-of-band ICMP messages. A Dynamic Profile Management Algorithm (“DPMA”) allows the G-QoS negotiators to negotiate, establish, and maintain the desired QoS level between the user applications by providing real-time monitoring of application parameters including bandwidth, buffer, and cache status information of the communicating client and server. A G-QoS applications programmer interface (“API”) allows network administrators to easily monitor and maintain the overall G-QoS architecture of the present invention. The G-QoS negotiators, G-QoS protocol, and DPMA form a generic QoS architecture that provides guaranteed QoS for user applications.

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